Amey: A Multipurpose, Russet-Skinned Potato Cultivar for the Eastern United States

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ABSTRACT

Amey is a late-maturing, russet-skinned, white-fleshed potato cultivar that yields more than Russet Burbank in most eastern United States potato production areas. Tubers of Amey are mostly oblong, occasionally long, with an evenly russetted skin. Tubers of Amey are smoother, more attractive, and have a much lower incidence of external defects than Russet Burbank. The specific gravity of Amey is equal to or greater than the specific gravity of Russet Burbank. French fries produced from Amey are lighter than or equal in color to those produced from Russet Burbank; however, tubers are frequently not long enough to satisfy the french fry industry. Baking and taste quality of Amey are excellent, and it has potential as a fresh market potato. Amey is resistant to race Ro1 of the golden nematode, powdery scab, and common scab. It is moderately susceptible to Verticillium wilt. It is susceptible to potato leafroll virus, late blight, and early blight.

RESUMEN

Amey es un cultivar de maduración tardía, piel marrón-rojiza y pulpa blanca, con rendimientos superiores a Russet Burbank en muchas áreas de producción de papa del este de los Estados Unidos. Los tubérculos de Amey son más oblongos y ocasionalmente más largos, con piel de coloración marrón rojiza. Asimismo, los tubérculos de Amey son más lisos, más atractivos y con mucho menor incidencia de defectos externos que los de Russet Burbank. La gravedad específica de Amey es igual o más grande que la Russet Burbank. Las papas fritas preparadas con Amey son más ligeras y de un color igual a las de dicha variedad, sin embargo, los tubérculos con frecuencia no son lo suficientemente largos para satisfacer los requerimientos de la industria de papas fritas. La calidad de horneado y palatabilidad de Amey es excelente y tiene potencial para el mercado de papas frescas. Amey es resistente a la raza Ro1 del nematodo dorado, roña y roña común. Es moderadamente susceptible a la marchitez por verticillium. Es susceptible al virus del enrollamiento de la papa, tizón tardío y tizón temprano.

BACKGROUND

The United States Department of Agriculture, the Maine Agricultural and Forest Experiment Station, the Agricultural Experiment Stations of New York, Pennsylvania, New Jersey, and Virginia, and the North Carolina Agricultural Research Service announced the release of Amey on September 21, 1999.

Amey was evaluated under the pedigree B9922-11, which was selected from a cross of B6987-145 (♀) x B7805-1 (♂) and first planted in 1980. B6987-145 was a white-skinned parent selected for medium maturity, high specific gravity, good chip color, resistance to PVX, and tolerance to scab. B7805-1 was a white-skinned parent selected for early maturity, long tuber conformation, attractive appearance, and resistance to PVY and race

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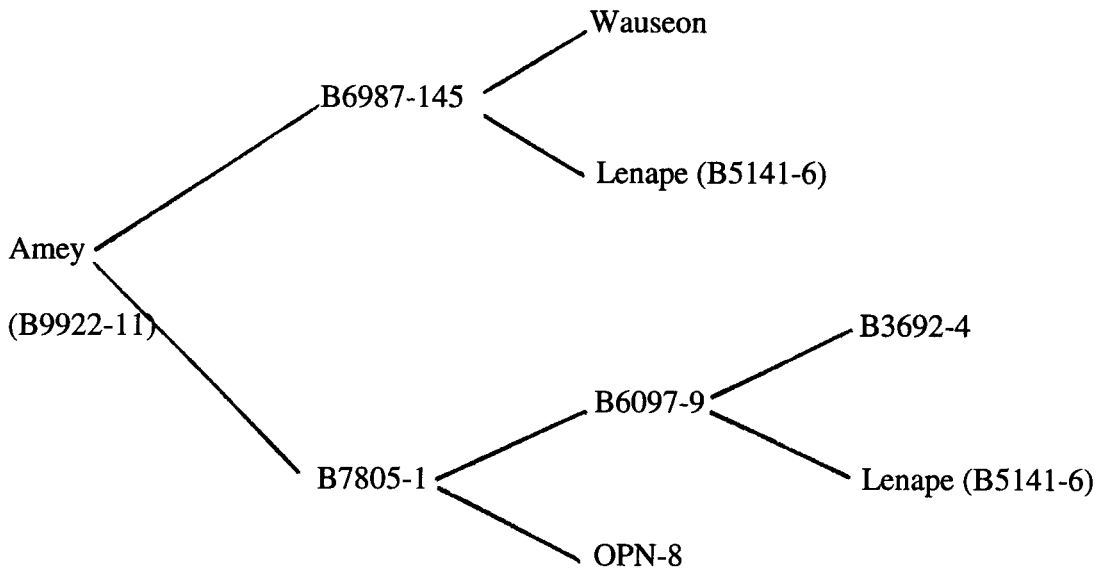
ADDITIONAL KEY WORDS: *Solanum tuberosum* L., fresh market potato, baking potato.



Ro1 of the golden nematode.

Breeding and seedling tuber production of Amey were done at the Beltsville Agricultural Research Center (BARC), Beltsville, MD, by R. E. Webb. Clonal selection and field performance evaluations were done on Chapman and Echo Lake Farms, Presque Isle, ME, by R. E. Webb and K. G. Haynes. Foliar and soil-borne disease evaluations were done by B. J. Christ in Centre and Potter counties, PA, and R. W. Goth in Presque Isle, ME. Preliminary evaluations were undertaken with cooperators in Maine,

FIGURE 1.
Foliage, flowers and tubers of Amey.

New York, Pennsylvania, New Jersey, Virginia, and North Carolina. Interregional performance trials through the NE-107 project and grower trials began in 1991. The name Amey is in recognition of Robert G. Amey, who is a source of inspiration to the senior author. The pedigree of Amey is as shown:

DESCRIPTION

PLANTS (Figure 1): *Maturity:* late. *Growth habit:* large, upright with good row cover. *Stems:* medium green; slight pubescence; very slight pigmentation with most pigmentation in the nodal region; *Wings:* small, inconspicuous, slightly waved. *Nodes:* slightly swollen. *Leaves:* medium green; slightly pubescent; open type. *Terminal leaflets:* medium, symmetrical, lobate. *Primary leaflets:* most are asymmetrical, lobate with short lobe on the right side of the midrib towards the petiole; usually three pairs. *Secondary leaflets:* few, small. *Tertiary leaflets:* small, abundant. *Midribs:* medium green, slight pubescence. *Petioles:* medium green, slight pubescence.

FLOWERS (Figure 1): moderate in number. *Buds:* purple with pink to cream tips with exposed stigma. *Calyx:* triangular, dark green, some pigmentation, average length about 6 mm. *Corolla:* lighter than the Royal Horticultural Society Colour Chart (1989 edition) purple group patch no. 76A, lighter purple towards the tips; when fully open folds back on itself with ruffled appearance; average width about 25 mm. *Anthers:* yellow-orange. *Pollen:* abundant. *Fertility:* poor female and male fertility.

TUBERS (Figure 1): *Shape:* mostly oblong, occasionally long, mean length 92 ± 14 mm, mean width 67 ± 8 mm, mean diameter 54 ± 6 mm. *Skin:* uniformly moderately to heavily russeted. *Eyes:* shallow. *TGA:* Total glycoalkaloid content of Amey and Russet Burbank averaged 5.21 and 7.89 mg per 100 g fresh weight, respectively, from tubers harvested in Presque Isle, ME, in 1999.

CHARACTERISTICS

Tubers of Amey are very attractive, mostly oblong, occasionally long, with a nice evenly russetted skin. Tuber conformation has been far superior to Russet Burbank under eastern United States growing environments.

Results of replicated yield trials of Amey vs several other russet-skinned cultivars at eight locations for five years are given in Table 1. Marketable yields in 22 location-year trials for Amey have averaged 30.3 T/ha compared to 27.8 T/ha for Russet Burbank, and specific gravity has averaged 1.084 for Amey vs 1.079 for Russet Burbank (Table 1). In six location-year trials, Amey

TABLE 1—*Comparative performance of AMEY and other russet-skinned cultivars[1] in USDA and cooperating state test plots from 1992-1996.*

Year	Test Site	Marketable Yield[2]	Specific Gravity[3]	Hollow Heart(%)
1992	USDA	45.8 (47.4)	85 (83)	5 (100)
	Maine	38.4 (42.7)	94 (92)	0 (18)
	Long Island	43.5 (45.6)	83 (78)	35 (28)
	Upstate NY	27.3 (28.0)	86 (86)	5 (3)
	Pennsylvania	32.9 (36.6)	86 (85)	0 (0)
	New Jersey	30.0 (30.1)	77 (74)	0 (3)
	Virginia	24.0 (19.4)[b]	87 (85)[b]	NT
	North Carolina	28.3 (33.5)	83 (73)	3 (0)
1993	USDA	21.6 (18.8)	82 (75)	0 (NT)
	Maine	25.1 (43.1)	95 (87)	0 (5)
	Long Island	40.2 (34.0)	80 (81)	5 (3)
	Upstate NY	31.0 (16.4)	84 (82)	5 (8)
	Pennsylvania	18.3 (0)	88 (79)	0 (0)
	New Jersey	14.6 (9.0)	67 (59)	0 (0)
	Virginia	22.2 (16.6)[b]	74 (79)[b]	0 (0)[b]
	North Carolina	NT	NT	NT
1994	USDA	NT	NT	NT
	Maine	30.3 (33.2)	93 (83)	0 (0)
	Long Island	31.6 (21.5)[a]	75 (57)[a]	23 (0)[a]
	Upstate NY	17.7 (13.0)	89 (84)	0 (10)
	Pennsylvania	39.7 (51.3)[c]	81 (70)[c]	40 (50)[c]
	New Jersey	29.0 (35.2)[c]	74 (62)[c]	0 (0)[c]
	Virginia	12.8 (8.3)[b]	59 (70)[b]	0 (0)[b]
	North Carolina	14.1 (10.3)	68 (57)	3 (3)
1995	USDA	29.7 (27.6)	84 (76)	0 (0)
	Maine	27.4 (23.2)	80 (72)	0 (0)
	Long Island	36.2 (36.7)[a]	79 (64)[a]	5 (0)[a]
	Upstate NY	25.1 (17.5)	80 (76)	8 (3)
	Pennsylvania	35.2 (26.2)[c]	87 (77)[c]	0 (0)[c]
	New Jersey	39.4 (31.9)[c]	82 (70)[c]	0 (0)[c]
	Virginia	24.3 (6.8)[b]	68 (67)[b]	7 (9)[b]
	North Carolina	13.2 (11.4)[b]	72 (69)[b]	0 (10)[b]
1996	USDA	44.2 (34.3)	86 (79)	0 (0)
	Maine	48.4 (40.6)	90 (85)	5 (10)
	Long Island	40.5 (24.7)[b]	81 (76)[b]	58 (15)[b]
	Upstate NY	33.2 (27.1)	85 (81)	3 (3)
	Pennsylvania	37.1 (42.3)[c]	88 (71)[c]	0 (8)[c]
	New Jersey	43.0 (32.2)[c]	85 (69)[c]	53 (18)[c]
	Virginia	NT	NT	NT
	North Carolina	19.8 (18.4)[b]	70 (74)[b]	0 (0)[b]
Amey vs Russet Burbank (22 location-years)		30.3 (27.8)	84 (79)	4 (9)
Amey vs Coastal Russet (2 location-years)		34.0 (29.2)	77 (61)	14 (0)
Amey vs BelRus (7 location-years)		22.4 (15.1)	73 (74)	11 (6)
Amey vs Russet Norkotah (6 location-years)		37.2 (36.6)	83 (70)	16 (13)

[1]Performance of the Russet Burbank standard given in parentheses except where otherwise indicated: [a]Coastal Russet, [b]BelRus, [c]Russet Norkotah.

[2]Marketable yield in T/ha.

[3]Specific gravity 1.0 omitted.

TABLE 2—*Response of Amey to seedpiece spacing, fertilizer rate, and seed management during 1995 and 1996 at Aroostook Research Farm, Presque Isle, Maine.*

Seed-piece Spacing (cm.)	Management Program[1]	Yield (t ha^{-1})[2] Total	U.S. #1 > 113 g	Size Distrib. (% by weight) < 113 g tubers	> 227 g tubers	Specific Gravity
1995 Growing Season:						
10	standard	31.8	26.0	17	29	1.086
20	standard	27.4	24.3	10	42	1.084
30	standard	28.4	26.4	5	55	1.086
40	standard	25.8	23.7	6	62	1.088
30	extra fertilizer	27.9	25.5	6	61	1.080
30	green sprouted	29.1	27.0	7	56	1.084
Statistical Analysis[3]						
Response to Spacing		**L	ns	**L	**L	ns
$LSD_{0.05}$		1.8	2.2	3	5	0.002
Cultivar Avg (over treatments.)[4]:						
Amey		28.4*	25.5*	9*	50*	1.085*
R. Norkotah (std.)		25.0	19.5	22	24	1.079
1996 Growing Season:						
10	standard	44.1	31.4	25	22	1.100
20	standard	39.9	29.6	20	26	1.100
30	standard	37.2	29.0	15	32	1.097
40	standard	34.7	29.6	9	49	1.093
30	extra fertilizer	38.3	31.7	12	46	1.090
30	green sprouted	38.8	29.1	18	27	1.092
Statistical Analysis[3]						
Response to Spacing		**L	ns	**L	**L	**L
$LSD_{0.05}$		2.5	3.1	3	5	0.002
Cultivar Avg (over treatments.)[4]:						
Amey		38.9ns	30.0*	17*	34ns	1.095*
R. Norkotah (std.)		38.2	27.9	22	35	1.076

[1]Standard management consisted of cultural practices typical of the production area, 1200 kg ha^{-1} of 14-14-14 fertilizer banded at planting, and seed cut by hand in mid-April (stored in the dark at 4 C after a 7-day suberization period). High fertilizer was the same as standard except that 1800 kg ha^{-1} of fertilizer was used. Green sprouted was the same as standard except that the seed was stored in a single layer at 13 C and under incandescent lighting until planting.

[2]Yield data includes only tubers that were >3.8 cm in diameter. Misshapen, sunburned, and growth-cracked tubers were excluded for the US#1 yield of >113 g tubers.

[3]ns = no significant effect. ** indicates a significant response at $p<0.01$. L = linear response to seedpiece spacing. Quadratic and cubic (nonlinear) responses were tested and were not significant.

[4]Averages over the six individual treatments are presented. Russet Norkotah was included as a check cultivar (data for the individual Russet Norkotah treatments is not presented). ns = no significant difference between cultivars. * indicates a significant difference between cultivars at $p<0.05$.

has had an average marketable yield of 37.2 T/ha compared to 36.6 T/ha for Russet Norkotah, and specific gravity has averaged 1.083 for Amey vs 1.070 for Russet Burbank (Table 1). Amey has slightly less hollow heart than Russet Burbank, but slightly more hollow heart than Russet Norkotah (Table 1).

Management trials were conducted at Aroostook Research Farm, Presque Isle, ME, during 1995 and 1996 using a split-plot design with six replications per treatment. Main-plots were cultivars (Amey, Russet Norkotah) and sub-plots were management treatments (Table 2). Sub-plots were 1 row (0.9 m) wide x 9.1 m long. During 1995, the experiment was planted on 25 May, vine-killed on 15 September, and harvested on 3 October. During 1996, the experiment was planted on 16 May, vine-killed on 3 September, and harvested on 23 September. Amey equaled or exceeded Russet Norkotah in this two year study and provided especially good performance compared to Russet Norkotah during the drier 1995 growing season (16.1 cm of rainfall from 1 June to 31 August compared to 28.8 cm in 1996). Amey had large vines and later vine maturity than Russet Norkotah during both growing seasons (data not shown). Both cultivars had plant stands that exceeded 96% of target stands. Specific gravity of Amey was significantly higher than that of Russet Norkotah during both growing seasons. Amey produced significantly higher yields than Russet Norkotah during 1995 and had larger tuber size. Total yields of the two cultivars were equal during 1996; however, Amey had a higher yield of tubers >113 g and a lower percentage of yield in the smallest size class. Both cultivars had low incidence of internal and external defects during 1995. Incidence of internal and external defects was generally low during 1996; however, Amey had approximately 5% growth-cracked tubers on a weight basis (data not shown). Total yield of Amey declined as seedpieces were spaced further apart during both growing seasons. US#1 yield of >113g tubers did not change with wider seedpiece spacings even though the percentage of large-sized tubers increased at the wider spacings. The optimum seedpiece spacing for Amey will depend on seed costs, but should generally be 20 to 30 cm if the crop is being grown for seed utilization and 30 to 40 cm if it is grown for processing or fresh market. The higher fertilizer rate did not increase yield during either year, but it did increase the percentage of large-sized tubers and decrease specific gravity. Green sprouting did not significantly affect yield during either season; however, it resulted in a shift toward the smaller tuber size classes during 1996. Based on these results, Amey does not appear to benefit from green sprouting or from high rates of fertilizer applied at planting.

TABLE 3—*Comparison of the french fry color[1] of Amey and Russet Burbank from different cold storage temperature environments in January in Presque Isle, Maine.*

Year	Cultivar	10° C	7° C	4° C	REC[2]
1992	Amey	4.1	3.8	4.7	3.7
	Russet Burbank	4.2	4.4	4.8	4.2
1993	Amey	3.2	3.6	4.2	3.4
	Russet Burbank	3.9	3.8	4.4	4.2
1995	Amey	2.5	3.3	5.0	3.3
	Russet Burbank	2.6	3.4	4.7	3.9
1996	Amey	2.8	3.0	4.5	3.0
	Russet Burbank	3.4	3.3	5.0	3.7
1997	Amey	2.3	2.1	4.5	3.1
	Russet Burbank	3.3	3.1	4.9	3.8
Mean	Amey	3.0	3.2	4.6	3.3
	Russet Burbank	3.5	3.6	4.8	4.0

[1]French fry color: 1-5 scale, 1-3 satisfactory, with 1 lightest.
[2]REC: Tubers were stored at 4 C, warmed up for 3 wk at 21 C, and then fried.

After harvest from yield trials conducted at Echo Lake in Presque Isle, ME, each year, 20 tubers of Amey and Russet Burbank were stored and processed from each of four different temperature storage environments in January (Table 3). Tubers were processed into french fries by cutting a 9.5-mm-diameter plug from the cross section of the tuber, rinsing the plugs in water, blotting them dry with a paper towel, and frying them at 185 C for 5 min. From all four storage environments, fry color in Amey was equal to or better than fry color in Russet Burbank. Amey and Russet Burbank were evaluated for cooked quality (Morrow *et al.* 1993, 1994, 1996) at the Potato and Horticultural Services Section, Prince Edward Island Department of Agriculture, Fisheries and Forestry, Kensington, Canada (Table 4). Overall baking quality is moderate to excellent, but boiling quality is generally poor.

TABLE 4—*Comparison of the boiling and baking qualities of Amey and Russet Burbank grown in Harrington, Prince Edward Island, Canada.*[1]

Year	Cultivar	Boil[2]	Bake[2]
1992	Amey	29	61
	Russet Burbank	56	83
1993	Amey	76	77
	Russet Burbank	75	81
1994	Amey	73	82
	Russet Burbank	89	78
Mean	Amey	59	73
	Russet Burbank	73	81

[1]From Morrow *et al.* (1993, 1994, 1996).
[2] Scores <70 = poor; 70 to 80 = moderate; >80 = excellent (score combines texture, color, flavor, and for boil scores, sloughing).

TABLE 5—*Comparative reaction to infection with* Streptomyces scabies *of Amey and other cultivars evaluated in Presque Isle, Maine, and Cranesville, West Virginia, in 1992-1993.*[1]

		Maine		West Virginia		
Cultivar	Index[2]	1992	1993	1992	1993	Mean
Amey	AI	0.64	0.39	0.37	0.76	0.54
	LI	0.72	0.59	0.72	0.75	0.69
Green Mountain	AI	0.92	0.73	0.55	0.87	0.77
	LI	0.89	1.00	0.98	0.81	0.92
Russet Burbank	AI	0.75	0.63	0.35	0.62	0.59
	LI	0.81	1.00	0.56	0.72	0.77
Superior	AI	0.58	0.38	0.33	0.47	0.44
	LI	0.87	0.98	0.84	0.64	0.83

[1]From Haynes *et al.* 1997.
[2]AI: Individual tubers were rated for percentage surface area covered on a 0 to 5 scale: 0=no scab; 1 = 1%-10%; 2 = 10%-25%; 3 = 25%-50%; 4 = 50%-75%; 5 = 75%-100%. The sum of the individual tuber ratings was divided by five times the number of tubers. $0 \leq AI \leq 1$.
LI: Individual tubers were rated for most severe lesion on a 0 to 5 scale: 0 = no lesions; 1 = superficial lesions < 10 mm in diameter; 2 = superficial lesions > 10 mm in diameter; 3 = raised lesions < 10 mm in diameter; 4 = raised lesions > 10 mm in diameter; 5 = pitted lesions. The sum of individual tuber ratings was divided by five times the number of tubers. $0 \leq LI \leq 1$.

Resistance to common scab, caused by *Streptomyces scabies* (Thaxter) Waksman & Henrici in Amey was tested in 1992-1993 in Presque Isle, ME, and Cranesville, WV (Haynes *et al.* 1997). The levels of resistance were similar to those found in Russet Burbank and Superior, two cultivars with moderate levels of resistance (Table 5).

In four years of testing in Potter County, PA, Amey was found to be resistant to powdery scab, caused by *Spongospora subterranea* (Wallr.) Lagerh. f. sp. *subterranea* (Table 6). Amey is also resistant to race Ro1 of the golden nematode (*Globodera rostochiensis)* and moderately susceptible to Verticillium wilt. It is susceptible to early blight, caused by *Alternaria solani* Sorauer (Table 7). Amey was evaluated in the 1998 National Late Blight Germplasm Evaluation Trials at five locations and was susceptible to late blight (Table 8).

TABLE 6—*Percentage of tubers infected with powdery scab for Amey and other cultivars evaluated in Potter County, PA.*

Cultivar	1993	1994	1995	1997
Amey	0.5	0.0	0.8	0.0
Atlantic	0.4	6.3	3.9	14.3
Katahdin	0.4	8.0	4.7	10.5
Kennebec	31.7	27.1	21.1	50.5
Russet Burbank	1.5	1.1	1.2	1.5
Norchip	5.6	14.0	—	—
Superior	2.5	8.9	5.4	19.2
WD-MSD (0.05)	24.9	11.2	10.0	18.4

[1]The experimental design was a randomized complete block with four replications, 15 hills per plot. Soil was naturally infested with *Spongospora subterranea* f. sp. *subterranea.*

Ten seedpieces of Amey were vacuum infiltrated with inoculum of *Clavibacter michiganensis* subsp. *sepedonicus* strain OFF at a population of 10^8 CFU/ml in quarter strength nutrient broth. Seedpieces were coated with zineb, stored at 50C, and planted on 28 May 1992. Foliar symptoms of ring rot (wilting, interveinal chlorosis, and marginal leaf necrosis) were observed on all 10 plants by 27 August. At harvest, 5%-10% of the tubers showed periderm cracking. Good internal tuber ring rot symptoms (yellowing, discoloration, separation, rot) were observed.

SEED AVAILABILITY

Foundation seed of Amey is available from Uihlein Farm of Cornell University, the New York State Seed Potato Farm. Requests for seed may be contracted directly through Dr. William Fry, Department of Plant Pathology, Cornell University, Ithaca, NY 14856.

TABLE 7—*Comparative foliar reaction to infection with* Alternaria solani *of Amey and other cultivars evaluated in Centre County, PA.*

Cultivar	1993[1]	1994[2]	1995[3]	1997[4]
Amey	78.4	45.6	64.2	45.8
Atlantic	90.4	25.3	77.5	62.5
Katahdin	54.9	25.5	58.3	20.4
Kennebec	22.3	7.2	43.8	9.6
Russet Burbank	35.9	8.0	50.0	16.7
Norchip	82.3	39.5	—	—
Superior	90.1	32.5	97.5	87.5
WD-MSD (0.05)	14.3	14.8	13.0	14.0

[1]Assessed for percentage early blight 1 September.
[2]Assessed for percentage early blight 30 August.
[3]Assessed for percentage early blight 15 August.
[4]Assessed for percentage early blight 25 August.

TABLE 8—*Comparative foliar reaction to infection with* Phytophthora infestans *of Amey and other potato clones evaluated in the 1998 National Late Blight Germplasm Evaluation Trials at five locations.*

	Area Under the Disease Progress Curve[2]				
Clone[1]	MI	ME	ND	NY	PA
Amey	2003	3270	1089	1909	1064
B0692-4	463	446	25	219	249
AWN86514-2	589	410	91	111	89
NorValley	2179	3173	1102	2031	470
LSD (0.05)	347	535	294	197	325

[1]B0692-4 and AWN86514-2 are highly resistant (Haynes *et al.* 1998). NorValley is very susceptible.
[2]The experimental design was a randomized complete block with three replications, five hills per plot. The US-8, A2 mating type of *P. infestans* was either naturally occurring (ME) or plots were inoculated with it (MI, ND, NY, PA). Plots were rated at approximately weekly intervals for percentage infected foliage following the appearance of late blight. Area under the disease progress curve was calculated (Shaner and Finney 1977).

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LITERATURE CITED

Haynes, K.G., R.W. Goth, and R.J. Young. 1997. Genotype x environment interactions for resistance to common scab in tetraploid potato. Crop Sci 37:1163-1167.

Haynes, K.G., D.H. Lambert, B.J. Christ, D.P. Weingartner, D.S. Douches, J.E. Backlund, G. Secor, W. Fry and W. Stevenson. 1998. Phenotypic stability of resistance to late blight in potato clones evaluated at eight sites in the United States. Amer J Potato Res 75:211-217.

Morrow, L.S., G.A. Porter, J.A. Sisson, E.S. Plissey, H. DeJong, T.R. Tarn, R. Schiavone, M.R. Henninger, J.B. Sieczka, D.E. Halseth, W. J. Arsenault, P. Boswall, R. Hassell, B.J. Christ, P.A. Ferretti, and S.B. Sterrett. 1996. Performance evaluations of potato clones and varieties in the Northeastern states-1994. Maine Agricultural Experiment Station Misc. Pub. 728.

Morrow, L.S., G.A. Porter, J.A. Sisson, E.S. Plissey, T.R. Tarn, R. Schiavone, H. DeJong, M.R. Henninger, J.B. Sieczka, E. Kee, D.E. Halseth, B.J. Christ, R. Hassell, S.B. Sterrett, R.J. Young, P. Boswall, W.J. Arsenault, and T. Simpson. 1994. Performance evaluations of potato clones and varieties in the Northeastern states-1993. Maine Agricultural Experiment Station Misc. Pub. 723.

Morrow, L.S., G.A. Porter, J.A. Sisson, E.S. Plissey, T.R. Tarn, M.J. Wannamaker, H. DeJong, M.R. Henninger, J.B. Sieczka, E. Kee, D.E. Halseth, B.J. Christ, M.A. Bennett, S.B. Sterrett, R.J. Young, P. Boswall, and W.J. Arsenault. 1993. Performance evaluations of potato clones and varieties in the Northeastern states-1992. Maine Agricultural Experiment Station Misc. Pub. 718.

Shaner, G. and R.E. Finney. 1977. The effect of nitrogen fertilization on the expression of slow-mildewing resistance in knox wheat. Phytopathology 67:1051-1056.